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EXAMINER

JOHNSON, CARLTON

ART UNIT PAPER NUMBER

2136

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/608,768

Applicant(s)

GAVRILESCU ET AL.

Examiner

Carlton V. Johnson

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-26,28-40 and 42-47 is/are pending in the application.
- 4a) Of the above claim(s) 1-19,27 and 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-26,28-40 and 42-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

1. This action is responding to application papers filed on **1-19-2007**.
2. Claims **20 - 26, 28 - 40, 42 - 47** are pending. Claims **20, 25, 26, 28, 34, 39, 40** have been amended. Claims **1 - 19, 27, 41** have been cancelled. Claims **20, 22, 26, 29, 32, 34, 36, 40, 43, 46** are independent.

### *Response to Remarks*

3. The following is in response to applicant's remarks dated January 19, 2007.
- 3.1 Applicant argues, "*... requesting by the second member authorization ...*". (see *Remarks Pages 9, 10 and amended claims*)

This is an added limitation and will be addressed when the claims are addressed.

- 3.2 Applicant argues, "*... including the published token to each member of the secure group ...*". (see *Remarks Page 9 and amended claims*)

This is an added limitation and will be addressed when the claims are addressed.

- 3.3 Applicant argues, "*... publish ...*". (see *Remarks Page 10*)

The Yeager prior art disclose the capability to publish information (i.e. including a certificate), and the capability for peers to have persistent storage (i.e. database) for

access to the published security information (i.e. certificate). (see Yeager paragraph [0256], lines 1-10)

3.4 Applicant argues, “ ... a revocation bitmap ... “. (see Remarks Page 11)

The Yeager and Aguilera prior art combination discloses a bitmap to be utilized as bits of revocation data. This is equivalent to applicant's invention whereby the manipulation of a bitmap to indication revocation information. (see Aguilera paragraph [0031], lines 1-5: bitmap representation for revocation list; paragraph [0027], lines 17-20: update revocation list, in order to revoke an entity (i.e. member))

3.5 The examiner has considered the applicant's remarks concerning a system for providing security to a set of interconnected network nodes includes the capability to monitor calls to the system, a group security manager configured to perform security-related acts by interacting with a group database to propagate security-related information to members of the group. Applicant's arguments have thus been fully analyzed and considered but they are not persuasive.

After an additional analysis of the applicant's invention, remarks, and a search of the available prior art, it was determined that the current set of prior art consisting of Yeager (20050086300), Aguilera (20040243827), Yellepeddy (20040111607) and Pabla (20040162871) discloses the applicant's invention including disclosures in Remarks dated January 19, 2007.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims **20, 34** are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling.

There is no disclosure for this assertion in the specification and the original claims. The only disclosure for a second member is in the original claims. The original claims state that a first member connects to a second member. There is no indication to designate any particular member is making the certificate renewal request.

This disclosure is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claims **26, 40** are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling.

There is no disclosure for this assertion in the specification and the original claims. The only disclosure for a published token in a graph database is in claim 41. The claim limitation states that security related information is available to the group member. There is no disclosure of the availability of information to each member of the

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"secure" group. There is no disclosure that specifically the published token is the one piece of security related information made available to the each group member.

This disclosure is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims **20 - 25, 34 - 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yeager** in view of **Yellepeddy et al.** (US Patent No. **20040111607**).

**Regarding Claims 20, 34**, Yeager discloses a method for a member in a group within a graph of interconnected peer nodes to granting privileges, the method comprising:

- a) receiving a certificate renewal request to a second member in the group; (see Yeager paragraph [paragraph 0225], lines 9-13: pipes, communications channel for data transmission between peer members)

Yeager discloses wherein the capability to renew membership in a peer group, and wherein the renewal is based on authorization from the administrator or based on one or more security policies. (see Yeager paragraph [0558], lines 4-8: membership renewal (i.e. remove, add) capability; paragraph [0225], lines 4-9: security policies utilized) Yeager does not specifically disclose the capability to renew a certificate. However, Yellepeddy discloses:

- b) requesting by the second member authorization from an administrator for renewing the certificate. (see Yellepeddy paragraph [0092], lines 1-5: renew certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Yellepaddy to enable the capability to renew a certificate in the processing of authentication information. One of ordinary skill in the art would have been motivated to employ the teachings of Yellepaddy in order to, within a cryptographic authentication environment, optimize verification and validation of the availability of a certificate utilizing an online status check protocol. (see Yellepaddy paragraph [0010], lines 1-4: "*... would be advantageous to have a method and system that for configuring a set of OCSP responders in order to improve the availability of each of the OCSP responders. ...*")

**Regarding Claims 21, 35,** Yeager discloses the method, computer-readable medium of claims 20, 34 wherein the renewal is based on the security policies if the authorization from the administrator is not received. (see Yeager paragraph [0086], lines 1-7:

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software; paragraph [0225], lines 4-9: membership based on policies) Yeager does not specifically disclose the capability to renew a certificate. However, Yellepeddy discloses wherein the capability for the renewal of a certificate. (see Yellepeddy paragraph [0092], lines 1-5: renew certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Yellepaddy to enable the capability to renew a certificate in the processing of authentication information. One of ordinary skill in the art would have been motivated to employ the teachings of Yellepaddy in order to, within a cryptographic authentication environment, to optimize verification and validation of the availability of a certificate utilizing an online status check protocol. (see Yellepaddy paragraph [0010], lines 1-4)

**Regarding Claims 22, 36;** Yeager discloses a method, computer-readable medium having computer-executable instructions to perform acts for a member in a group within a graph of interconnected peer nodes to renew a certificate granting privileges, the method comprising:

Yeager discloses the capability to publish content, peer information or records (see Yeager paragraph [0086], lines 1-7: software, computer readable medium; paragraph [0223], lines 6-11: publish content, peer information or records), and the capability to renew membership based on security policies (see Yeager paragraph [0225], lines 4-9: renew membership). Yeager does not specifically disclose the capability to renew a certificate.

However, Yellepeddy discloses:

- a) a request to renew the certificate; (see Yellepeddy paragraph [0011], lines 7-11: request; paragraph [0225], lines 4-9: renew certificate) and
- b) performing renewal. (see Yellepeddy paragraph [0092], lines 1-5: renew certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Yellepaddy to enable the capability to process a request to renew a certificate in the processing of authentication information. One of ordinary skill in the art would have been motivated to employ the teachings of Yellepaddy in order to, within a cryptographic authentication environment, to optimize verification and validation of the availability of a certificate utilizing an online status check protocol. (see Yellepaddy paragraph [0010], lines 1-4)

**Regarding Claims 23, 37,** Yeager discloses the method, computer-readable medium of claims 22, 36 wherein the renewal is performed online, the method further comprising:

the graph of interconnected nodes (see Yeager paragraph [0029], lines 1-6: multiple interconnected nodes). Yeager does not specifically disclose the capability to process a certificate chain, or renew a certificate.

However, Yellepeddy discloses:

- a) contacting one or more authorized members with a shorter chain before contacting authorized members with a longer chain; (see Yellepeddy paragraph [0057], lines 16-19; paragraph [0079], lines 1-5; paragraph [0079], lines 14-22: certificate chain processing, chain length (i.e. short or long)) and

- b) performing one or more renewal attempts to achieve a chain that is of shorter length, wherein number of renewal attempts are proportional to length of the chain; (see Yellepeddy paragraph [0057], lines 16-19; paragraph [0079], lines 1-5; paragraph [0079], lines 14-22: certificate chain processing, chain length (i.e. short or long); paragraph [0225], lines 4-9: renew certificate) and
- c) if a chain is beyond a predetermined length, performing an offline renewal to shorten the chain. (see Yellepeddy paragraph [0057], lines 16-19; paragraph [0079], lines 1-5; paragraph [0079], lines 14-22: certificate chain processing, chain length (i.e. short or long); paragraph [0225], lines 4-9: renew certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Yellepaddy to enable the capability to utilize a certificate chain, and renew a certificate in the processing of authentication information. One of ordinary skill in the art would have been motivated to employ the teachings of Yellepaddy in order to, within a cryptographic authentication environment, to optimize verification and validation of the availability of a certificate utilizing an online status check protocol. (see Yellepaddy paragraph [0010], lines 1-4)

**Regarding Claims 24, 38,** Yeager discloses the method, computer-readable medium of claims 22, 36. (see Yeager paragraph [0086], lines 1-7: software, computer readable medium) Yeager does not specifically disclose the capability to process a certificate chain, or renew a certificate. However, Yellepeddy disclose wherein the renewal is repeated if a shorter chain can be achieved. (see Yellepeddy paragraph [0057], lines

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16-19; paragraph [0079], lines 1-5; paragraph [0079], lines 14-22: certificate chain processing, chain length (i.e. short or long); paragraph [0225], lines 4-9: renew certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Yellepaddy to enable the capability to utilize a certificate chain, and renew a certificate in the processing of authentication information. One of ordinary skill in the art would have been motivated to employ the teachings of Yellepaddy in order to, within a cryptographic authentication environment, to optimize verification and validation of the availability of a certificate utilizing an online status check protocol. (see Yellepaddy paragraph [0010], lines 1-4)

**Regarding Claims 25, 39,** Yeager discloses the method, computer-readable medium of claims 22, 36 wherein more than one authorized member is the group is active, each authorized member in the group enabled to process the request. (see Yeager paragraph [0086], lines 1-7: software, computer readable medium; paragraph [0558], lines 4-8: more than one member authorized to process requests) Yeager does not specifically disclose the capability to process a certificate chain, or renew a certificate. However, Yellepeddy disclose wherein enabled to process the renewal request, providing each authorized member in the group with a random back-off period prior to attempting to process the renewal request, the random back-off proportional to a length of the chain of the authorized member. (see Yellepeddy paragraph [0057], lines 16-19;

paragraph [0079], lines 1-5; paragraph [0079], lines 14-22: certificate chain processing, chain length (i.e. short or long); paragraph [0092], lines 1-5: renewal of certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Yellepaddy to enable the capability to utilize a certificate chain, and renew a certificate in the processing of authentication information. One of ordinary skill in the art would have been motivated to employ the teachings of Yellepaddy in order to, within a cryptographic authentication environment, to optimize verification and validation of the availability of a certificate utilizing an online status check protocol. (see Yellepaddy paragraph [0010], lines 1-4)

7. Claims **32, 33, 46, 47** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yeager** in view of **Aguilera et al.** (US Patent No. **20040243827**).

**Regarding Claims 32, 46**, Yeager discloses a method, computer-readable medium having computer-executable instructions to perform acts for revoking one or more members of a group of interconnected nodes within a graph, the method comprising:

a group of interconnected nodes or a graph (see Yeager paragraph [0029], lines 1-6: grouping of interconnected nodes), the usage of software for prior art implementation, and the usage of one or more serial numbers, the one or more serial numbers identifying the one or more members of the group. (see Yeager paragraph [0086], lines 1-7: software, computer-readable medium; paragraph [0173], lines 1-6: unique identification (i.e. UUID) or serial numbers as identification

information) Yeager does not specifically disclose the usage or update of a revocation bitmap.

However, Aguilera discloses:

- a) identifying one or more bits in a revocation bit map, the bits identifying the one or more members of the group; (see Aguilera paragraph [0031], lines 1-5: bitmap representation for revocation list) and
- b) altering the one or more bits in the revocation bit map, the altering revoking the one or more members of the group. (see Aguilera paragraph [0031], lines 1-5: bitmap representation for revocation list; paragraph [0027], lines 17-20: update revocation list, in order to revoke an entity (i.e. member))

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Aguilera to enable a bitmap representation for revocation list information. One of ordinary skill in the art would have been motivated to employ the teachings of Aguilera in order to, within a cryptographic authentication peer-to-peer environment, enable the capability to utilize a small amount storage for the bitmap revocation information. (see Aguilera paragraph [0031], lines 1-5: "*... It is worth noting that the group list and the revocation list can be stored as a bitmap or as explicit lists. The bitmap representation has the advantage that it is compact, but it requires capability identifiers to be small and thus limits the number of outstanding capabilities. ...*")

**Regarding Claims 33, 47**, Yeager discloses the method, computer-readable medium of claims 32, 46. (see Yeager paragraph [0086], lines 1-7: software, computer-readable medium) Yeager does not specifically disclose the usage or update of a revocation bitmap. However, Aguilera discloses wherein the revocation bitmap is scalable. (see Aguilera paragraph [0031], lines 1-5: bitmap representation for revocation list; paragraph [0033], lines 1-3: scalable, adjustable size for bitmap representation)

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Aguilera to enable a bitmap representation for revocation list information. One of ordinary skill in the art would have been motivated to employ the teachings of Aguilera in order to, within a cryptographic authentication peer-to-peer environment, enable the capability to utilize a small amount storage for the bitmap revocation information. (see Aguilera paragraph [0031], lines 1-5)

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of 35 U.S.C. 102 which forms the basis for all obviousness rejections set forth in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims **26, 28 - 31, 40, 42 - 45** are rejected under 35 U.S.C. 102(e) as being anticipated by **Yeager et al.** (US PG PUB No. **20050086300**).

**Regarding Claims 26, 40**, Yeager discloses a method, computer-readable medium having computer-executable instructions to perform acts for ensuring that a publisher of information in a record to a secure group in a graph of interconnected nodes has authority to publish to the secure group, the method comprising:

- a) creating a token (see Yeager paragraph [0577], lines 7-11: tokens, credentials utilized for security) for the publisher, the token containing information located in a role assigned to the publisher, the role identifying privileges of the publisher; (see Yeager paragraph [0578], lines 4-6: role assignments, privileges assigned) and
- b) matching the token (see Yeager paragraph [0577], lines 7-11: tokens, credentials utilized for security) against a security descriptor for the record to be published, the security descriptor providing a list of rights associated with each role, wherein the token is published in a graph database, the graph database providing security related information including the published token to each member of the secure group. (see Yeager paragraph [0578], lines 4-6: privileges, access control list linked to role; paragraph [0256], lines 1-3: storage, database containing security information))

**Regarding Claims 28, 42**, Yeager discloses the method, computer-readable medium of claims 26, 40 wherein the graph database enables deferred record validation by enabling a group member to defer until required security information is available to the

group member. (see Yeager paragraph [0256], lines 1-3: storage, database containing peer information)

**Regarding Claims 29, 43**, Yeager discloses a method, computer-readable medium having computer-executable instructions to perform acts for revoking a member of a group of interconnected nodes within a graph, the method comprising:

- a) publishing a revocation record to the group, the revocation record identifying the member; (see Yeager paragraph [0086], lines 1-6: software, computer readable medium; paragraph [0223], lines 6-11: publish content, peer information or records: publish content, peer information; paragraph [0558], lines 4-8: remove or revoke membership) and
- b) revoking any records published by the member according to the revocation record. (see Yeager paragraph [0223], lines 6-11: publish content, peer information or records; paragraph [0558], lines 4-8: remove or revoke membership)

**Regarding Claims 30, 44**, Yeager discloses the method, computer-readable medium of claims 29, 43 wherein the revocation record is published with validation time sufficient to ensure that a current certificate of the revoked group member expires before the revocation. (see Yeager paragraph [0591], lines 7-10: expiration time period for credentials; paragraph [0558], lines 4-8: remove or revoke membership; paragraph [0135], lines 1-3; paragraph [0135], lines 5-11: certificate utilization)

**Regarding Claims 31, 45**, Yeager discloses the method, computer-readable medium of claim 29 wherein if the member to be revoked is an administrator, the administrator privileges are first deprecated prior to the publishing the revocation record. (see Yeager paragraph [0086], lines 1-6: software, computer readable medium; paragraph [0558], lines 4-8: some members, managers, administrators to remove membership in peer group)

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlton V. Johnson whose telephone number is 571-270-1032. The examiner can normally be reached on Monday thru Friday , 8:00 - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER  
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Carlton V. Johnson  
Examiner  
Art Unit 2136

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March 28, 2007

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